

Our Reference: MND-100-A

PATENT

**SWIVEL-BASE SUNLIGHT REFLECTOR  
AND KIT FOR ASSEMBLING SAME**

FIELD OF THE INVENTION

[0001] This invention relates to novelty items suitable for retail sale and particularly to a sunlight refractive reflector having a simple but effective stand which permits the attitude of a refractive disc to be adjusted relative to incident sunlight rays.

BACKGROUND OF THE INVENTION

[0002] It is known to reflect sunlight onto a wall or other suitable projection surface to create aesthetically pleasing displays. A device for accomplishing this is disclosed in U.S. Patent No. 4,832,453 issued May 23, 1989 to Janet Saad-Cook. The device is complicated in structure and would be expensive to manufacture as disclosed.

SUMMARY OF THE INVENTION

[0003] The present invention provides a simple and inexpensive sunlight reflecting device capable of producing pleasing displays or patterns on walls or other suitable surfaces. The invention, at least in its preferred form, takes advantage of the light refracting characteristics of the recording surface of a common compact disc by providing the disc along with other components to create an easily manually manipulable swivel base for a compact disc which allows it to be placed on any convenient surface near a window which is flooded with sunlight.

[0004] In the preferred form, the invention comprises a blank compact disc with a standard center hole, a metal ball having a non-diametric flat surface machined thereon, a strip of two-sided tape for attaching the flat surface of the ball to the non-refracting/non-recording side of the compact disc and over the center hole and an annular base which is stable when placed on a flat surface and which has a cavity formed, for example, by a through-hole to receive the ball in a stable relationship therein. This combination is easily assembled after which the attitude of the disc can

be changed without the use of tools or special knowledge to cause the reflected and refracted sunlight to fall upon a nearby wall and in an aesthetically interesting and pleasing fashion.

[0005] The term "non-diametric surface" is used herein to refer to a surface the largest dimension of which is less than a full diameter of the ball on which the surface is found.

[0006] In the preferred form, the kit further comprises a cap which fits over the center hole of the compact disc on the exposed reflective side so as to improve the appearance thereof. The outer surface of the disc also provides a place for location of a trademark or other decorative indicia.

[0007] Other applications of the present invention will become apparent to those skilled in the art when the following description of the best mode contemplated for practicing the invention is read in conjunction with the accompanying drawing.

#### BRIEF DESCRIPTION OF THE DRAWING

[0008] The description herein makes reference to the accompanying drawing wherein like reference numerals refer to like parts throughout the several views, and wherein:

[0009] FIG. 1 is a perspective view of a device constructed in accordance with the invention placed on a flat surface near a window flooded with sunlight to cause an aesthetically pleasing pattern to be cast on a nearby wall;

[0010] FIG. 2 is a perspective view of an assembled device for use in the environment of FIG. 1; and

[0011] FIG. 3 is an exploded view of the device of FIG. 2 showing various unassembled components thereof.

#### DETAILED DESCRIPTION OF THE ILLUSTRATIVE EMBODIMENT

[0012] FIG. 1 shows the device 10 of the present invention resting on a flat window sill surface 12 adjacent a window 14 which is flooded with sunlight as shown by the double arrows. The device 10 is effective to cast an aesthetically pleasing and interesting refracted light pattern P on an adjacent wall 16.

**[0013]** Looking to FIGS. 2 and 3, the device 10 is shown to comprise a blank compact disc 18 of approximately four inches in diameter and having a light refractive recording surface 20 and an opposite undersurface 24. A center hole 26 is formed in the compact disc 18 for the purpose of mounting it in a player as a memory device, the center hole 26 playing no particular part in the functionality of the disc 18 in the combination of the present invention.

**[0014]** A swivel stand is provided by means of a metal ball 28 having a non-diametric flat surface 30 machined thereon. A small strip 32 of two-sided adhesive tape is provided for adhesively securing the underside 24 of the compact disc 18 to the flat surface 30 of the ball 28. The base further comprises a metal annulus 34 having a beveled through-hole 36 formed therein, the diameter of which is sufficient to cradle the ball 28 therein in a stable fashion and permit the attitude of the compact disc 18 to be manually changed by simple manipulation and without the use of tools. A small plastic cap 38 may be provided to cover the center hole 26 on the refractive surface 20. A trademark or other indicia may be added to the top surface of the cap 38. Alternatively, the disc may be specially made without a hole.

**[0015]** The combination shown in FIGS. 2 and 3 may be sold or provided to an end user in assembled form or as an unassembled kit at a reasonable price along with a set of instructions (not shown) for simple assembly without the use of tools. Such assembly would, of course, include removing protective strips (not shown) from the opposite sides of the tape strip 32, using the prepared two-sided tape strip 32 to cement the flat surface 30 of the ball 28 to the underside 24 of the compact disc 18, and thereafter placing the ball and the disc in the assembled fashion on the annulus 34 in the manner shown in FIG. 1. As the sun angle changes, the attitude of the disc 18 can be changed along with it to make sure that the pattern P is cast in the desired fashion on a nearby wall.

**[0016]** Although the disc 18 is described herein as a blank or even used compact disc which is typically used for data recording, it is to be understood that any inexpensive lightweight flat plate-like object having a sunlight refractive surface

on at least one side can be used. The plate-like object need not be round but can assume any other shapes including square, rectangular, oval and so forth.

**[0017]** While the invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood that the invention is not to be limited to the disclosed embodiments but, on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims, which scope is to be accorded the broadest interpretation so as to encompass all such modifications and equivalent structures as is permitted under the law. It is also to be understood that the light pattern P changes with sun angle and the angle of incidence on the disc surface; i.e., it may be rainbow-shaped or circular or V-shaped as desired.